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AUTHOR McDonnell, Sheila
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ABSTRACT

Seven programs funded under Title I Umbrella and Impact Aid and carried out in elementary and intermediate/junior high schools of District 24, Queens, New York, are described in this report. The programs are: (1) Strengthened Basic Skills Program; (2) Diagnosis and Treatment of Reading Disabilities; (3) Diagnostic/Prescriptive Mathematics Program; (4) Decentralized Non Public School Components conducted in two parochial schools; (5) Teaching English as a Second Language; (6) Optional Assignment Diagnosis and Treatment of Reading Disabilities; and (7) Optional Assignment Diagnostic/Prescriptive Mathematics Program. For each, the target population, educational objectives, and program activities are described and student achievement data are presented. Recommendations are also offered regarding continuation of funding and improvement in program procedures. A discussion of statistical methodology utilized for the overall evaluation of the seven programs is also included in the report. (GC)

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ED189263

FINAL EVALUATION REPORT

1978 - 1979

DISTRICT 24 DECENTRALIZED TITLE I UMBRELLA

&

IMPACT AID (PL 81-874)

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UD020791

Virginia E. Morrissey
Community Superintendent

Prepared by:

Sheila McDonnell
Director Funded Programs

District 24 Decentralized Title I
Umbrella And Impact Aid (PL 81-874)

STATISTICAL METHODOLOGY

In each of the programs, students were tested using tests appropriate for the program content. The specific tests used in each program are enumerated in the original proposal and are reviewed in the previous discussion of the programs. In all cases, in accordance with SED requirements, sub-tests were used wherever they were available. Sub-tests were not available for Kindergarten and first grade and some special circumstances.

In previous years, the grade equivalent score was frequently used in reporting data. The grade equivalent score is no longer a permissible score. The score which is reported is either the national percentile or the normal curve equivalent (NCE). The national percentile is simply the student's percentile rank compared to the average student score across the United States.

To perform statistical analyses, scores must be in a particular form which is commonly referred to as a normal distribution. The national percentile score is, accordingly, transformed into an NCE score. NCE scores range from a low of the first percentile to a high score of the ninety-ninth percentile. At the first, fiftieth, and ninety-ninth percentiles, the national percentile score and NCE are identical. Under no circumstances should an NCE score be considered to be equivalent to a national percentile.

To perform the statistical analysis, students are evaluated at the beginning of the year and the end of the year. Their raw scores on the test are first converted to national percentile

scores for students who took the test at the same time. There are only two testing periods per year,--one in the fall and one in the spring. The national percentile scores are then converted to NCE scores and these are used for analysis.

The specific test used is formally known as a correlated t-test. The average score of the students at the beginning of the term is compared to the average score of the students at the end of the term using this statistical procedure. The assumption is that if the class or program sustains the students at the same level throughout the year, their NCE scores for the beginning and the end of the year will be the same. If the class ability has been improved, the end of year or post test score will be higher. Conversely, if the students declined in their relative ability, the post test score would be less.

Interpretation of this type of statistical test is somewhat ambiguous. Educational research has shown that minority group students, who frequently constitute a substantial portion of students in remedial programs, tend to fall behind non-minority students. For this reason, many people feel that if a program is able to maintain students at the same level throughout the year, the program is actually successful because it has prevented a deterioration in the students' relative ability. Obviously, if an increase is found, this is considered significant.

Evaluation serves several purposes. One purpose of evaluation is to aid in designing instruction appropriate to the individual student. Accordingly, results from both pre and post tests are available to classroom and remedial teachers to aid and assist

them in their direct work with their students. At the next level, evaluation assists in identifying potential problem areas within the district and are, therefore, tools to assist principals and program directors in directing and administering the program. These results are of most concern to the individual schools and are not included here, but are made available to the schools. The third purpose of the evaluation is to provide an overall measure of the effectiveness of the funded programs in the district. Those results are included in this report.

On the following pages, the evaluation results are reported for each of the programs for each of the grades and the sub-tests used. Since these details are included, they will only be summarized here. In general, the programs made substantial increases. The amounts differed from program to program and where less-than-average increases were found, note has been made so that attention may be directed to improving the program in those areas. Because of certain administrative problems, the total number of students tested on both pre and post tests was not as great as had been desired and it is hoped that this problem will be improved in the coming year. The statistical evaluation indicates the general overall success of the programs.

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I
UMBRELLA AND IMPACT AID (PL 81-874)

Project Title: Strengthened Basic Skills Program

Title I Function Number: 5079-91622

Impact Aid Function Number: 5079-~~91652~~ 98722

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director,
Federal & State Programs

PROGRAM DESCRIPTION

STRENGTHENED BASIC SKILLS PROGRAM

The Strengthened Basic Skills (SBS) Program was designed to strengthen the basic reading and language skills of first, second and third grade pupils at P.S. 19 and P.S. 143. The original target population was to consist of 230 first grade, 215 second grade and 210 third grade pupils. As the program was implemented and target pupils selected, including discharged pupils and new admissions, the actual target population varied from the proposal. Table A compares the estimated and actual target populations by grade level.

Table A Estimated and Actual Target Populations

	Grade 1	Grade 2	Grade 3	Total
Estimated	344	270	270	884
Actual	359	243	260	862

The target population pupils were selected on the basis of achievement levels below minimum competency, i.e. below the 23rd percentile on screening instruments. First grade pupils were screened using level II of the Stanford Early School Achievement Test (SESAT). Second and third grade participants were screened via the comprehension subtest of the Stanford Achievement Test Primary I and Primary II levels, respectively. Teacher judgement via informal testing or English LAB results were used to select pupils who were not screened the previous June.

The staffing of the Strengthened Basic Skills Program consists of a Master Teacher in each school and paraprofessionals who implement the DISTAR instructional program with small groups of pupils. A total of 20 paraprofessionals at P.S. 19 and 9 paraprofessionals at P.S. 143 implemented small group instruction using the reading and language tracks of the DISTAR program. Group size was initially set at 8 pupils. However, group size varied over the course of the year since some pupils progressed at a faster than expected rate, some at an average rate, while others had to be recycled through the same instructional units. Variations and flexibility of instruction are assets, since the program is designed to move pupils at their own pace. One of the major roles of the Strengthened Basic Skills Master teachers are to train the paraprofessionals in all aspects and levels of the DISTAR program and to schedule them so that they can be utilized when and where they are needed at each learning station. In addition to training and scheduling, the Strengthened Basic Skills Master Teachers coordinate materials utilization, supervise pupil grouping, provide demonstration lessons and organize and implement parent workshops.

The heart of the Basic Strengthened Skills Program was the implementation of instruction in the areas of reading and language using the DISTAR instructional system and materials. The DISTAR system organization provides for groups of 8 - 10 pupils lead by a teacher or a paraprofessional. Using a teacher display manual, the DISTAR leader provides a series of stimulus questions or remarks which require an active response on the part of the total pupil group which is then immediately reinforced by the DISTAR leader.

In the first phase of DISTAR reading, the child learns that the squiggles we call letters represent sounds. He learns to say the sounds for the letters and to blend these sounds together to make a word. The student spells a word by saying the sounds slowly - mmmeee. Then he says the sounds fast - me.

DISTAR reading materials consistently relate the sound with the symbol. The student is taught the sound of forty symbols in Reading I. They include the lower case letters of the alphabet, certain joined letters that are sounded together such as th, and the long vowels with diacritical marks. Silent letters appear in small type.

To minimize student confusion, the shapes of symbols that look alike, such as b and d have been modified slightly. These letters are taught at widely spaced intervals to make certain the student knows the sound of one symbol before he is introduced to another with a similar shape.

The student is also given special aids such as markers that separate words, left to right directional arrows, and arrows from the end of one line to the beginning of the next.

Rhyming exercises teach the child to decode words that are similar in form, and reading sounds exercises teach him to sound out words.

While he is still in Reading I, the student begins to read groups of words as complete thoughts. He starts by reading aloud one or two words to complete a sentence from a story by the teacher. Then he progresses to complete stories which become longer and more difficult as the program continues.

Reading II emphasizes comprehension. The student begins to answer questions about what he has read, progressing from simple yes and no questions to multiple-choice and fill-in responses. He is required to make inferences about the stories and to answer questions based on these inferences.

In Reading II, the student learns letter names, capital letters, and the letters before and after each letter in the alphabet. As he reads longer and more complicated stories, he begins to use his sight vocabulary as well as his word attack skills. Special prompts and aids are gradually phased out.

Reading II also teaches the student to follow a series of directions. He is asked to read instructions and perform the specified activity. For example, "When the teacher gives you a white card, stand up." Here the student learns to stand up only when the teacher gives him a white card and not when she gives

him a yellow or red one. This kind of exercise teaches the child the importance of precise understanding of what he reads.

Reading to Learn, the third part of the DISTAR Reading Program, emphasizes the skills children will need to learn new concepts and ideas from reading textbooks and non-fiction material, skills important for successful learning.

The stories in the student readers deal with science and social science factual information - often presented within a fictional framework. The children learn to concentrate on the key parts of a story - on the rules and facts presented in it. They learn how to base deductions on these rules and how to apply them to new situations. Important skills for reading, remembering, and thinking operation. And they are important for academic success. The program also deals with new word-attack skills and dictionary skills.

Entire-class activities are introduced in Reading to Learn. These are used in combination with small group instruction and independent work. The workbooks provide comprehension, application, and review exercises for each lesson. Work check procedures at the end of the lesson provide the teacher with criteria for evaluating children's understanding. Correction procedures are given to help each child learn.

Since more than 80 percent of P.S. 19's pupil population and 50% of P.S. 143's students are from homes where languages other than English are spoken, the language component of DISTAR is also utilized. The DISTAR Language Program is designed to teach basic language concepts and skills. Language I focuses on the language of instruction, the language the teacher uses in the classroom. The emphasis in Language II is on teaching the skills children need to analyze language and to use them to describe qualities and relationships observed in the world around them.

Children who already know basic language concepts can begin their formal language instruction with Language II. For example, first-grade teachers will find it appropriate for teaching the skills of formal thought and language analysis.

Language I systematically takes a child from the identification of familiar objects to the description and classification of those objects.

The child also learns the precise meaning of both familiar and new concepts and to use these concepts in statements and questions. Particular care is taken to teach concepts that are important for logical reasoning such as "if-then," before-after," "some," and "only." After completing Language I, the child will have learned the instructional language teachers use to teach arithmetic, reading, science, and social science.

Language II builds on and expands the skills and concepts taught in Language I, but a new emphasis is added: analyzing language. In Language II a child not only describes familiar objects but looks at the language procedures used to

describe them. Some of the areas in which language analysis is taught are: Opposites, Synonyms, Questioning Skills, Analogies, Description, and Definition.

Language II is also designed to give a child more information about the world around him - information that he can process with his expanding language - analysis skills. Some of the areas covered are Classification, Function, Absurdity, and Problem Solving. Information about such subject as seasons, animal classifications, measurement, and occupations is also presented.

Language III

DISTAR Language III consolidates and expands skills taught in Levels I and II. It teaches students to think logically. To express themselves concisely in writing. And does it in the carefully organized way that's made our DISTAR System so successful.

Language III builds on skills developed in the first two levels. Children are lead through oral and written activities in texts or workbooks, then work independently writing sentences, paragraphs and stories.

In addition to the reinforcement of learning process built in the instructional materials and teaching procedures, student materials in the form of "Take-Homes" are also used. Sections of exercises from presentation books are given to students as a reward for achievement. Students are encouraged to read the take-home materials to their parents and family. Thus, take-homes not only reinforce and consolidate daily lesson concepts but also foster self-concept development and parental involvement. Parent involvement is also encouraged via parent workshops.

Although DISTAR materials have three levels, these do not necessarily correspond to grade levels. DISTAR materials have their own criterion oriented tests to determine placement and progress through the materials. If sufficient mastery is not achieved, pupils are recycled through the same instructional units. Smaller group tutoring is also provided by paraprofessionals for pupils who are absent for long periods or for pupils who progress at a slow pace.

The objectives of the Strengthened Basic Skills Program were to demonstrate significant growth in basic reading skills. At the first grade level, achievement was measured by pretest/posttest administration of the Stanford Achievement Test, Primary I level. At the second and third grade levels, growth in auditory discrimination, phonetic analysis, structural analysis, auditory vocabulary, word reading and reading comprehension were measured by pretest/posttest administration of the Stanford Diagnostic Reading Test, Red (2nd grade) and Green Levels (3rd grade).

The evaluation design utilized the norm-referenced U.S.O.E. Model. Mean pretest and posttest standard scores on the evaluation measures were converted to percentiles and Normal Curve Equivalents.

The t-test for correlated groups was used to determine the significance of the difference between pretest and posttest mean standard scores. The attached evaluation summaries the pretest and posttest mean percentile scores, Normal Curve Equivalent gains and the t value and significance level of the pretest/posttest differences.

The data indicates that the Strengthened Basic Skills Program surpassed its objectives in terms of increased achievement at each of the grade levels serviced and on each of the reading skill areas tests.

All Normal Curve Equivalent gains were positive, indicative of a positive treatment effect. In addition, all t-test values were positive and significant beyond the .01 level.

Conclusions

The data examined supports the effectiveness of the Strengthened Basic Skills Program in developing the reading skills of the target population.

Recommendations

1. The Strengthened Basic Skills Program is an effective methodology for developing reading skills among the target population and should be continued.

2. Parent workshops for parents of children in the Strengthened Basic Skills Program should be held on a more regular basis.

DISTRICT 24

1978-79 EVALUATION

PROGRAM Strengthened Basic Skills 5079-91622

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
1	C	N=198	32.55	44.63	12.08	14.33	18.17	16.68	0.494	10.19
1	E	N=193	19.39	51.68	32.29	13.68	20.98	18.62	0.489	24.10
1	9	N=11	11.55	26.91	15.36	6.93	4.23	4.41	0.793	11.55
2	B	N=162	25.78	28.64	2.86	13.84	12.74	12.17	0.583	2.99
2	C	N=160	29.43	33.98	4.54	13.76	14.11	13.17	0.554	4.36
2	E	N=158	32.98	40.99	8.01	13.40	16.42	12.51	0.665	8.05
3	B	N=140	21.68	27.51	5.83	12.66	12.98	13.15	0.475	5.25
3	C	N=144	23.23	36.91	13.68	12.22	10.28	10.91	0.542	15.05
3	E	N=58	22.22	33.10	10.88	15.12	17.09	19.07	0.304	4.34
3	G	N=80	21.89	36.32	14.44	13.99	12.02	16.69	0.183	7.74

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1978-79

DISTRICT 24 DECENTRALIZED TITLE I

UMBRELLA AND IMPACT AID (PL 81-874)

Project Title: Diagnosis & Treatment of Reading Disabilities

Title I Function Number: 5079-91623

Impact Aid Function Number: 5079-~~91653~~ 98726

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director
Federal & State Programs

PROGRAM DESCRIPTION

DIAGNOSIS AND TREATMENT OF READING DISABILITIES PROGRAM

The Diagnosis and Treatment of Reading Disabilities Program is a highly structured, individualized reading program designed to provide remedial reading services in a small group setting. One center, staffed by a reading specialist teacher, was established at P.S. 143 to service 48 fourth and fifth grade pupils, and a second center at P.S. 19 to service 48 pupils at each grade level.

The actual grade levels of the target population serviced in the DTRD program varied from that projected in the proposal. Table A compares the projected and actual participating pupils.

TABLE A

Projected and Actual Target Populations in Diagnosis and Treatment of Reading Disabilities Program

	TITLE I		
	Grade 4	Grade 5	Total
Projected	58	86	144
Actual	59	96	155

Target population pupils were selected from among those below minimum competency levels in reading. Participants were selected on the basis of scoring below the 23rd percentile on the New York City Reading Test administered during March 1978. DTRD project participants were serviced an hour each day, five days a week in each center. Group size was approximately 12 pupils. The keystone of the program is the use of the diagnostic/prescriptive approach in the teaching of reading: a remedial approach which carefully analyzes the unique needs of each student in terms of specific reading strengths and weaknesses. The detailed analysis or diagnostic aspect of the program serves as the basis for and is followed by a series of prescriptive teaching sequences which are designed to build on the students reading strengths and alleviate his weaknesses. As the pupil progresses in the program the diagnosis is constantly updated and the activities and materials are revised to reflect the learner's changing needs.

Data from the administration of the Stanford Diagnostic Reading Test provided the basis for the detailed diagnostic profile of pupil strengths and weaknesses. Diagnostic information was supplemented by the use of formal and informal testing in such areas as perceptual skills, visual discrimination, word recognition skills, structural analysis, phonics word meaning, literal comprehension and inferential comprehension.

With the data provided by initial on-going diagostic procedures, reading specialist teachers engaged in prescriptive teaching activities. For each pupil, the reading specialist teachers prepared lists of specific instructional objectives and "contracted" with each child to meet or surpass these objectives. The instructional objectives consist of specific decoding vocabulary, comprehension and study skills. The instructional objectives are in turn correlated to a wide variety of materials; books, workbooks, cassettes, kits, dittos, worksheets, etc., located in each reading center. At the end of the contract period, one to two weeks, teacher and pupil evaluated the completed work and plan the next contractual period.

Each reading specialist was required to maintain management records, including pupil diagnostic profiles, pupil work folders, pupil contracts/logs and a reading specialist-classroom teacher conference log detailing on-going articulation between the reading specialist and classroom teacher. Reading specialists were also required to attend the monthly in-service training program.

The objectives of the Diagnosis and Treatment of Reading Disabilities program were to demonstrate achievement beyond expectation in the reading skill areas measured by the appropriate level of the Stanford Diagnostic Reading Test.

The evaluation design utilized the subtests of the Stanford Diagnostic Reading Test on a pretest-posttest basis. Participants in grades three and four were administered the Green Level, while grade five pupils were tested on the Brown Level.

The statistical design utilized the U.S.O.E. Norm Referenced Model. Pretest and posttest scales scores, means and standard deviations for each SDRT subtest were calculated, as were the correlations between pretest and posttest scores. Mean scores at each grade level were converted to percentiles and Normal Curve Equivalents. The t-test for correlated groups was used to determine the significance of the difference between pretest and posttest scaled score means. The data on the following page summarizes pre- and post-test mean percentile scores, Normal Curve Equivalent gains and t value and corresponding significance levels of the pretest/post-test differences.

The positive Normal Curve Equivalent (NCE) gains data appearing in Table B suggests that remedial reading pupil participants demonstrated gains at a level exceeding that of the normal population. The correlated t statistic values for Title I participants also suggests that significant achievement gains were made as a result of the DTRD program.

CONCLUSIONS

The data and analysis for fifth grade Title I pupils points to the effectiveness of the Diagnosis and Treatment of Reading Disabilities program in surpassing its objectives of demonstrated growth in reading skill development. The data for fourth grade Title I pupil participants also supports the achievement of program objectives.

RECOMMENDATIONS

1. The data generally support a recycling of the Diagnosis and Treatment of Reading Disabilities program.

2. Group size (12) for a remedial reading of this type is large. Consideration should be given towards reducing group size or adding a paraprofessional to support instruction.

DISTRICT 24

1978-79 EVALUATION

PROGRAM DIAGNOSIS AND TREATMENT OF READING DISABILITIES 5079 91623

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
4	B	N=46	22.22	38.39	16.17	12.95	12.71	10.70	0.652	10.25
4	C	N=47	31.79	50.72	18.94	10.08	13.37	11.23	0.573	11.56
4	G	N=48	33.06	43.92	10.85	13.26	14.52	11.91	0.636	6.32
5	B	N=85	31.09	38.07	6.98	14.41	14.39	9.69	0.480	4.38
5	C	N=87	33.60	37.76	4.16	10.26	11.94	12.43	0.381	3.12
5	G	N=84	35.25	42.30	7.05	13.50	15.15	9.39	0.791	6.83

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1978-79

DISTRICT 24 DECENTRALIZED TITLE I

UMBRELLA AND IMPACT AID (PL 81-874)

Project Title: Diagnostic/Prescriptive Mathematics Program

Title I Function Number: 5079-91624

Impact Aid Function Number: 5079-~~91654~~ 98725

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director
Federal & State Programs

PROGRAM DESCRIPTION

DIAGNOSTIC/PRESCRIPTIVE MATHEMATICS PROGRAM

The Diagnostic/Prescriptive (D/P) Mathematics program established remedial mathematics centers, one each, at P.S. 19, P.S. 143 and three at I.S. 61. The program was designed to provide corrective math diagnostic and prescriptive services to 48 target pupils at the elementary school level and 180 pupils at the junior high school level who scores one and a half or more years below grade level on the mathematics section of the Wide Range Achievement Test.

Each D/P Math center was staffed by a teacher specially trained for the program. A Mathematics Resource Teacher to coordinate the program was also funded through Title I. Although each D/P math center at the elementary level was projected to service both fourth and fifth graders, it was more administratively feasible to restrict the Title I participants to the fifth grade. PSEN funded centers which utilized the same selection criteria serviced fourth grade pupils. The change in grade level of the participants was necessitated by the pull-out nature of the program in order to avoid conflicting time schedules with classroom and remedial reading instruction. The number of pupils serviced, 48 per center, remained the same as was projected in the proposal. Pupils attended the elementary D/P Math Centers for one hour per day on a daily basis; and 45 minutes daily on the junior high school level.

The instructional methodology for this project is an individualized, self contained instructional system with eleven skill area strands (numeration, addition, subtraction, multiplication, division, fractions, applications, money, time, measurements, and geometry). The individualized math program is organized to present the math skills and concepts in a logical succession of eleven content strands and nine levels of difficulty for each strand. The program is implemented in two phases. First phase is comprehensive placement testing via diagnostic testing to determine each pupil's level of mastery in each of the eleven content strands. Based upon the profile developed as a result of the placement testing, the teacher begins an ongoing series of test-teach-test cycles which constitute the prescriptive implementation phase. Each teaching cycle is composed of a series of activities which include math activities with manipulative and audio-visual instructional materials, pupil work in math skillfolders and small group math seminars led by the teacher. Following the teaching cycle, unit post-tests are taken to determine mastery. If the student has mastered the unit, he moves on to another instructional unit. If the unit is not mastered, a reteaching process ensures.

The diagnostic/prescriptive math instructional methodology described above was implemented via the Individualized Mathematics System, a comprehensive instructional program that provided the major diagnostic/prescriptive instructional materials necessary for instruction. In addition, math manipulative and audio-visual materials are provided for the pupils in order to implement the instructional math activities.

Each math center has a calculator for reinforcement, review and understanding of arithmetic laws. The Digitor is used to reinforce basic algorisms. The Systems 80 machines and software are applicable to each of the math strands and levels of difficulty. Tape recorders are used by the teachers to record lessons and by individual and small groups of pupils to receive instruction.

The objectives of the Diagnostic/Prescriptive Mathematics program were to demonstrate achievement beyond expectation in the mathematics skill areas of computations, applications and problem solving. Growth in these skill areas were measured on a pretest-posttest basis utilizing the appropriate level of the Stanford Mathematics Test. The evaluation design utilized the U.S.C.E. Norm Referenced Model.

Pretest and posttest scaled score means and standard deviations for each subtest were calculated, as was the correlation between pre-and-posttest scores. Mean scaled scores were converted to percentiles and Normal Curve Equivalents. The t-test for correlated groups was used to determine the significance of the difference between the no treatment expectation and actual posttest scaled score means.

The data summary presented on the next page shows a consistent trend of increased mean posttest percentile standings. The statistics of norms are such that average performance is defined by maintaining the same percentile standing from Fall to Spring (pretest to posttest) testings. The Title I participating population serviced by the D/P Mathematics Program consistently surpassed the performance or gains made by similar pupils represented in the norm group.

CONCLUSIONS

The data reported for the Diagnostic/Prescriptive Mathematics program indicate program objectives were more than well met. In addition, achievement was consistent across all subtests skill areas. This is expecially noteworthy, since achievement in computational skills usually exceed development in concept development and mathematics problem solving.

RECOMMENDATIONS

1. The Diagnostic/Prescriptive Mathematics program has been shown to be highly effective over the past years. If needs are identified among additional Title I eligible pupils, the program should be expanded to service more pupils by increasing group size, adding paraprofessional assistance, or by reducing instructional time to 45 minutes per day or four hours per week.

2. The D/P math instructional model also appears to be successful at the junior high school level. It should be recycled at the junior high school level in order to confirm the 1977-78 results.

DISTRICT 24

1978-79 EVALUATION

PROGRAM Diagnostic Prescriptive Math 507991624

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
5	L	N=88	37.57	46.19	8.63	15.92	17.27	16.48	0.510	4.91
5	N	N=88	30.94	41.22	10.27	12.34	11.63	12.98	0.415	7.42
5	S	N=88	33.72	40.26	6.55	13.53	14.28	9.50	0.768	6.46
6	L	N=15	31.93	43.80	11.87	11.54	11.71	17.36	.116	2.65
6	N	N=15	26.60	33.47	6.87	10.82	14.09	16.84	0.104	1.58
6	S	N=14	23.64	35.57	11.93	10.13	8.84	6.97	0.738	6.41
7	L	N=63	31.78	33.30	1.52	11.89	12.21	13.90	0.335	0.87
7	N	N=63	29.70	34.57	4.87	12.93	11.11	15.23	0.204	2.54
7	S	N=63	29.19	31.05	1.86	13.40	12.40	17.24	0.109	0.86
8	L	N=48	31.98	31.96	-0.02	9.45	12.40	13.72	0.233	0.01
8	N	N=48	33.52	34.03	0.56	9.82	11.56	13.75	0.181	0.28
8	S	N=48	31.90	39.77	7.88	10.72	9.80	8.98	0.620	6.07

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I
UMBRELLA AND IMPACT AID (PL 81-874)

Project Title:	Decentralized Non-Public School Components at Our Lady of Sorrows and St. Leo Schools	
Title I Function Number:	O.L.S.	5079-91625
	St. Leo	5079-91626
Impact Aid Function Number:	Not Applicable	

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director, Federal & St. Prog.

PROGRAM DESCRIPTION

NON-PUBLIC SCHOOLS DIAGNOSIS AND TREATMENT OF READING DISABILITIES PROGRAM AT OUR LADY OF SORROWS AND ST. LEO EDL PROGRAM

The non-public school reading centers at Our Lady of Sorrows and St. Leo schools represent highly-structured, individualized reading programs designed to provide remedial reading services in a small group setting. Each center was staffed by a part-time reading specialist teacher (4 hours at Our Lady of Sorrows, 4 hours at St. Leo). The program at Our Lady of Sorrows was designed to service 2 groups of 24 second and third grade pupils on a daily basis for one hour. The St. Leo program was designed to service 48 pupils in grades four through eight for 40 minute periods three times a week. Selection of pupil participants was made from among eligible pupils appearing on the certified lists perpared by the Office of Educational Statistics. The number and grade level of the actual participants varied from those proposed, as summarized in Table 1.

Table 1. Projected and Actual Pupil Participants in the Non-Public School Component

	OUR LADY OF SORROWS			ST. LEO					
	Gr. 2	Gr. 3	Total	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Total
Projected	24	24	48	6	6	12	12	12	48
Actual	24	24	48	6	10	11	10	11	48

The keystone of the program is the use of the diagnostic/prescriptive approach in the teaching of reading: a remedial approach which carefully analyzes the unique needs of each student in terms of specific reading strengths and weaknesses. The detailed analysis or diagnostic aspect of the program serves as the basis for and is followed by a series of prescriptive teaching sequences which are designed to build on the students reading strengths and alleviate his weaknesses. As the pupil progresses in the program the diagnosis is constantly updated and the activities and materials are revised to reflect the learner's changing needs.

Data for the administration of the Stanford Diagnostic Reading Test provided the basis for the detailed diagnostic profile of pupil strengths and weaknesses. Diagnostic information was supplemented by the use of formal and informal testing in such areas as perceptual skills, visual discrimination, word recognition skills, structural analysis, phonics, word meaning, literal comprehension and inferential comprehension. With the data provided by initial on-going diagnostic procedures, reading specialist teachers engaged in prescriptive teaching activities. For each pupil, the reading specialist teachers prepared lists of specific instructional objectives and "contracted" with each child to meet or surpass these objectives. The instructional objectives consist of specific decoding vocabulary, comprehension and study skills. At Our Lady of Sorrows school the instructional objectives are in turn correlated to a wide variety of materials; books, workbooks, cassettes, kits, dittos, worksheets, etc., located in the reading center. At St. Leo's school, the instructional objectives are correlated to the EDL Learning 100 System which utilizes audio-visual hardware, software and associated instructional materials.

At the end of the contract period, one to two weeks, teacher and pupil evaluate the completed work and plan the next contractual period.

The data for pupils in the second and third grades at Our Lady of Sorrows school, as indicated by positive Normal Curve Equivalent gains, indicate that non-public school participants demonstrated gains on both 2nd and 3rd grade levels except on the 2nd grade auditory vocabulary subtest.

The data for pupils at St. Leo's school, which utilized EDL Learning System 100 methodology, is positive for sixth, seventh and eighth grade levels, but most were not statistically significant.

This was associated with, in large measure, the relatively small sample size (10 or 11 pupils) which exhibited a great deal of variability in terms of standard deviations.

CONCLUSIONS

The pattern of positive NCE gains for participants in the two non-public school components suggest the achievement of the program objective.

RECOMMENDATIONS

1. The data support a recycling of the non-public school program.

2. Teacher judgement should be added to the test score criterion for pupil selection. Despite eligibility, those most in need should be selected for program participation.

DISTRICT 24

1978-79 EVALUATION

Decentralized Non-Public School Components

PROGRAM at Our Lady of Sorrows and St. Leo Schools

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
Our Lady of Sorrows		5079-91625								
2	B	N=23	27.04	24.91	-2.13	10.32	11.99	9.53	0.645	1.07
2	C	N-23	29.00	30.65	1.65	10.13	14.30	12.16	0.550	0.65
2	E	N=23	40.78	49.65	8.87	9.81	11.22	10.91	0.469	3.90
3	B	N=23	22.30	30.83	8.52	10.89	10.96	10.60	0.529	3.86
3	C	N=24	29.92	33.25	3.33	11.08	11.56	8.90	0.692	1.84
3	G	N=18	27.28	36.61	9.33	10.88	11.14	8.61	0.695	4.60
St. Leo's EDL		507991626								
6	B	N=21	35.67	38.71	3.05	15.32	13.51	12.27	0.644	1.14
6	C	N-21	26.81	35.95	9.14	11.51	9.20	10.14	0.540	4.13
6	G	N=21	37.57	44.04	6.48	17.37	15.09	8.13	0.884	3.65
7	B	N=10	36.20	38.90	2.70	12.04	12.94	7.69	0.813	1.11
7	C	N=10	39.40	41.70	2.30	8.11	8.03	9.07	0.369	0.80
7	E	N=10	42.60	52.00	9.40	16.62	20.62	16.49	0.626	16.49
8	B	N=11	45.55	47.55	2.00	18.78	20.19	11.90	0.816	0.56
8	C	N=11	45.55	48.45	2.91	16.24	12.11	12.52	0.645	0.77
7	G	N=10	53.40	59.40	6.00	20.42	15.23	22.80	0.207	0.83

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I
UMBRELLA AND IMPACT AID (PL 81-874)

Project Title: High Intensity Reading Centers at I.S. 6

Title I Function Number: 5079-91628

Impact Aid Function Number: 5079-~~91628~~ 91723

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director, Federal & St. Prog.

PROGRAM DESCRIPTION

HIGH INTENSITY READING CENTERS AT I.S. 61

The High Intensity Diagnosis and Treatment of Reading Disabilities Program is a highly structured individualized reading program designed to provide remedial reading services in a classroom setting to target population children reading below minimum competency levels. The keystone of the program is the use of the diagnostic/prescriptive approach in the teaching of reading: a remedial approach which carefully analyzes the unique needs of each student in terms of specific reading strengths and weaknesses. The detailed analysis or diagnostic aspect of the program serves as the basis for and is followed by a series of prescriptive teaching sequences which are designed to build on the students' reading strengths and alleviate his weaknesses. As the pupil progresses in the program, the diagnosis is constantly updated and the activities and materials are revised to reflect the learner's changing needs.

At the outset of the program, pupils are diagnosed on a special set of performance criterion assessments consisting of an initial module of the I-O (Instructional Objectives) tests from the classroom management system. Specific materials and activities for each child are then automatically prescribed according to the initial diagnosis. This process of diagnosing and prescribing is continued throughout the year. All testing and learning activities are designed for pupil self-direction requiring a minimum of direct teacher input. As each child masters his unique set of instructional objectives that only he needs to learn, new I-O tests are administered and new prescriptions are assigned. Each child moves through his own unique curriculum at his own pace. Materials and activities have been carefully selected to provide training in instructional objectives. These, including basic survival skills, can be adjusted to the content needs, levels and rates of each individual child. Thus, the materials are mostly self-directing and self-correcting. The child moves independently (occasionally, but not usually, in small groups) with a minimum of direct teacher interface.

The High Intensity Reading Centers included an I-O bank of over 150 objectives and prescriptions and the entire classroom management system to service approximately 540 target population children divided into four instructional groups (approximately 32 children per instructional group).

The High Intensity Program funded reading specialist teachers on the junior high school level. The responsibilities of the reading specialist teachers included specific diagnostic procedures followed by the construction of individual diagnostic profiles for each pupil. The pupil's diagnostic profile served as the basis for a series of prescriptive teaching sequence designed to meet the pupil's specific needs.

Full time educational assistants were also employed. Each assisted in the daily and long-range planning, and assisted in the prescriptive aspects of the program by working with individuals or small groups. In addition, they cataloged and organized instructional materials. They also attended the inservice training sessions as well as the pre-service training, in addition to ongoing "on the job" training.

A third teacher also worked with each group. Tax levy Language Arts teachers were assigned each operational period and worked under the direction of the

reading specialist teachers.

Each center was active for approximately 25 periods a week. Class groups (approximately 32 children per group) met for five periods of 40 minutes per week or a total of 200 minutes per week. The participant/staff ratio for instructional sessions was 10 to 1. Each reading specialist maintained the following records for each pupil in his/her program:

1. Daily record of attendance
2. Stanford Diagnostic Test results
3. Basic Test of Reading Comprehension results
4. Student Record Book (Diagnostic Profile)

One of the problems associated with urban schools, pupil mobility, particularly affected the High Intensity Program at I.S. 61. Of the over 500 pupils who were serviced by the High Intensity Reading Centers, complete pretest and posttest data was available for only 432 pupils. Data is lost through mobility; that is, pupils moving in and out of the attendance zone.

The objectives of the High Intensity Reading Program were to demonstrate achievement beyond expectation in the reading skill areas measured by the Stanford Diagnostic Reading Test.

The evaluation design utilized the subtests of the Brown Level of the Stanford Diagnostic Reading Test on a pretest-posttest basis. Pretest and posttest scales scores means and standard deviations for each SDRT subtest were calculated, as were the correlations between pretest and posttest scores. Mean scores at each grade level were converted to percentiles and normal curve equivalents. The t-test for correlated groups was used to determine the significance of the difference between pretest and posttest scaled score means.

The data on the following page show that increases in pretest to posttest standings were evident in most of the SDRT subtests at each grade level. The trend of positive NCE gains, which were, for the most part, statistically significant, suggests that program participants made gains greater than those of a normal population with similar achievement status.

CONCLUSIONS

The general trend of the data suggest that the High Intensity Program achieved its objective of demonstrated growth in reading skills development. Additional stress, however, should be made in the area of auditory vocabulary development.

RECOMMENDATIONS

The data support a recycling of the High Intensity Reading Program.

DISTRICT 24

1978-79 EVALUATION

PROGRAM Hi-Intensity Reading Program 5079-91628

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
6	B	N=103	33.06	34.17	1.12	12.51	11.67	11.36	0.561	1.00
6	C	N=100	35.91	42.86	6.95	10.31	8.06	10.37	0.383	6.70
6	G	N=96	39.98	50.48	10.50	17.24	14.65	11.84	0.735	8.69
7	B	N=147	31.97	34.18	2.22	11.72	9.27	8.41	0.702	3.20
7	C	N=148	37.18	41.38	4.20	10.61	10.18	7.49	0.741	6.83
7	G	N=150	41.06	43.73	2.67	14.95	16.20	11.20	0.745	2.92
8	B	N=145	35.54	35.58	0.03	11.85	11.40	7.49	0.793	0.06
8	C	N=146	34.16	37.76	3.60	10.45	9.51	8.78	0.617	4.96
8	G	N=144	39.19	43.19	4.01	14.48	14.22	10.16	0.750	4.73

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I UMBRELLA
AND
IMPACT AID (PL 81-874)

Project Title: Teaching English as a Second Language

Title I Function Number: 5079-91629

Impact Aid Function Number: ~~5079-91659~~

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell, Director
Federal & State Programs

PROGRAM DESCRIPTION

TEACHING ENGLISH AS A SECOND LANGUAGE

This component was designed to provide English as a Second Language services for non-English dominant pupils in order to increase their competencies in the areas of understanding, speaking, reading and writing English.

The selection of target population pupils was prioritized as follows: (1) non-English, non-Spanish dominant children scoring below the 10th percentile on the most recently administered English Language Assessment Battery; (2) non-English, non-Spanish dominant pupils scoring between the 11th and 21st percentiles on the English Assessment Battery; (3) Spanish-dominant students not serviced by existing Consent or Title VII bilingual programs whose score on the English Language Assessment Battery lies below the 10th percentile; (4) Spanish-dominant students not serviced by existing Consent Decree or Title VII programs whose score on the English Language Assessment Battery lies between the 11th and 21st percentile.

In the elementary schools, instruction was offered to eligible participating pupils for a minimum of 5 hours per week. Pupils most limited in English language ability received one to two hours per day, five days per week. Pupils between the 11th and 21st percentile received one hour per day of ESL instruction five days per week or an hour and 15 minutes per day four days per week. Group size was approximately 12 to 15 pupils per group. Unscheduled instructional time will be used for preparation of materials, individual tutoring, pupil testing and in-service training activities. At the intermediate levels, participating pupils received a minimum of five 42 minute periods per week.

The actual grade levels of the target population serviced in the TESL Program varied from that projected in the proposal. Table 1 compares the projected and actual target populations.

	GRADE						
	1	2	4	5	7	8	Total
Projected	20	20	20	30	20	20	130
Actual	15	5	4	31	22	41	146

English as a Second Language instructional methodology utilized a structured linguistically based approach. This approach included learning a basic oral vocabulary, including auditory discrimination and oral reproduction leading to use of words in a sentence context. The pupils were taught to isolate initial sounds within the context of meaningful spoken words. As a second step, pupils were taught that the sound is recorded by a letter. Visual discrimination of letters were never drilled in isolation, but presented as part of a key picture which represents a whole spoken word. These spoken words were then represented graphically, where the focus was shifted from isolated sounds to whole words leading to sentences.

In this manner, repetition, response, replacement and student initiated drills were incorporated into this entire process of understanding, speaking, reading and writing structured, programmed, linguistic approach.

The ESL component provided services to a diverse group of children in terms of interests, language and reading levels, and individual learning approaches, maturity, ability and preferred learning modalities. The program dealt with this diversity of factors by offering a broad range of multi-media materials such as textbooks, audio-visual software, programmed learning sequences and enrichment reading books. It used both instructional methods and personnel that can be used for individualized diagnostic and prescriptive instruction and independent instruction. The use of programmed instruction, and audio-visual materials motivated students to work on their own, at their own pace thereby eliminating the deletrious effects of competition, and allowed for acceleration of individual pupils able to work independently.

The teachers of English as a Second Language administered the English Language Assessment Battery to determine the instructional level for each pupil participant. After identifying the ESL entry level skills and other diagnostic testing, each teacher of ESL organized appropriate instructional groups. TESLs provided on-going and continuous language instruction including concomitant English reading and writing skills. Where paraprofessionals were assigned, they were utilized to provide individualized language instruction to participating pupils under the supervision and direction of the ESL teacher.

The Language Assessment Battery was also used as the posttest measure. The statistical design followed the U.S.O.E. Norm Referenced Model.

The data indicates that pupils at all grade levels were able to increase their percentile standing from pretest to posttest. These pupils made gains greater than monolingual English dominant pupils with the same initial status who were represented in the norming population. Pupils in grade seven, on the average, made raw score gains equal to comparable monolingual English speakers represented in the standardization group. However, only the gains made by pupils at the third grade level reached statistically significant levels.

CONCLUSIONS

The data from the Language Assessment Battery suggests that gains in English language skills were made for most pupils in all subtests but two, auditory analysis and comprehension. These gains were fairly substantial in mose cases and in the exceptions noted above the number of children tested was small.

It should also be noted that the state of the art in terms of measurement among monolingual speakers of languages other than English is at a rather primitive level.

RECOMMENDATIONS

1. The data suggests gains in English language skills, but the LAB test, like so many other instruments, leaves much to be desired in terms of measurement of the particular target population. Until more appropriate instruments are developed and validated, realistic evaluations of program effectiveness will be unfulfilled.

2. Program design and methodology for the TESL program should be closely monitored by the program coordinator to insure that the needs of the TESL pupils are being met. Under such conditions, the program should be recycled.

DISTRICT 24

1978-79 EVALUATION

PROGRAM T.E.S.L. 5079-91629

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
1	B	N=13	24.54	32.08	7.54	15.01	12.02	17.95	0.132	1.51
1	C	N=14	27.00	40.64	13.64	14.29	6.01	14.45	0.185	3.53
1	E	N=13	13.46	42.77	29.31	9.20	8.92	8.85	0.523	11.93
1	9	N=12	12.08	27.17	15.08	6.87	4.13	4.32	0.804	12.11
2	B	N=3	18.33	22.00	3.67	9.87	10.82	2.08	0.984	3.05
2	C	N=3	35.00	32.33	-2.67	5.51	22.50	5.51	0.994	0.84
2	E	N=3	40.33	45.33	5.00	18.90	12.58	7.00	0.981	1.24
2	9	N=5	18.00	35.20	17.20	9.25	4.32	9.50	0.214	4.05
3	B	N=4	19.50	19.25	-0.25	10.41	1.50	10.75	-.160	0.05
	C	N=4	23.00	36.75	13.75	4.08	7.85	6.13	0.635	4.49
3	G	N=4	26.75	34.50	7.75	10.14	14.48	16.40	0.149	16.40
3	9	N=4	14.00	51.25	37.25	3.16	11.03	12.82	.468	5.81
5	B	N=2	11.50	29.00	17.50	2.12	19.80	21.92		1.13
5	G	N=2	33.50	38.50	5.00	23.33	17.68	5.66	1.000	1.25
5	9	N=4	27.00	60.25	33.25	12.03	15.67	6.55	0.921	10.15
7	B	N=16	25.56	27.13	1.56	16.12	12.89	7.57	0.887	7.57
7	9	N=7	37.14	53.14	16.00	12.60	12.75	8.00	0.801	5.29
8	B	N=8	24.38	29.63	5.25	8.42	12.96	12.40	0.390	1.20
8	C	N=8	23.63	27.88	4.25	10.70	13.44	8.55	0.772	1.41
8	G	N=6	13.50	26.00	12.50	11.40	15.81	18.51	0.103	1.65
8	9	N=5	6.20	24.60	18.40	7.16	11.26	6.31	0.858	6.52
13	9	N=21	5.38	17.67	12.29	3.65	5.04	4.30	0.550	13.08

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I UMBRELLA
AND
IMPACT AID (PL 81-874)

Project Title: Optional Assignment
Diagnosis and Treatment of Reading Disabilities

Title I Function Number: 5079-91630

Impact Aid Function Number: 5079-~~91650~~ 95124

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell, Director
Federal & State Programs

PROGRAM DESCRIPTION

OPTIONAL ASSIGNMENT DIAGNOSIS AND TREATMENT OF READING DISABILITIES PROGRAM

The Optional Assignment Diagnosis and Treatment of Reading Disabilities Program is a highly structured individualized reading program designed to provide remedial reading services in a small group setting.

One full-time center at J.H.S. 125 and half-time centers at P.S. 71, 81, 91, 153 and J.H.S. 119 were planned and established. The actual grade levels of the target population serviced varied from that projected in the proposal. The table below compares the projected and actual target population.

	Grade							
	3	4	5	6	7	8	9	Total
Projected	32	32	32	0	24	24	24	168
Actual	12	32	52	54	19	25	39	233

The keystone of the program is the use of the diagnostic/prescriptive approach in the teaching of reading: a remedial approach which carefully analyzes the unique needs of each student in terms of specific reading strengths and weaknesses. The detailed analysis or diagnostic aspect of the program serves as the basis for and is followed by a series of prescriptive teaching sequences which are designed to build on the students' reading strengths and alleviate his weaknesses. As the pupil progresses in the program, the diagnosis is constantly updated and the activities and materials are revised to reflect the learner's changing needs.

Data from the administration of the Stanford Diagnostic Reading Test provided the basis for the detailed diagnostic profile of pupil strengths and weaknesses. Diagnostic information was supplemented by the use of formal and informal testing in such areas as perceptual skills, visual discrimination, word recognition skills, structural analysis, phonics, word meaning, literal comprehension and inferential comprehension.

With the data provided by initial or on-going diagnostic procedures, reading specialist teachers engaged in prescriptive teaching activities. For each pupil the reading specialist teachers prepared lists of specfic instructional objectives and "contracted" with each child to meet or surpass these objectives. The instructional objectives consist of specific decoding, vocabulary, comprehension and study skills. The instructional objectives are in turn correlated to a wide variety of materials; books, workbooks, cassettes, kits, dittos, worksheets, etc., located in each reading center. At the end of the contract period, one to two weeks, teacher and pupil evaluate the completed work and plan the next contractual period.

Each reading specialist was required to maintain management records, including pupil diagnostic profiles, pupil work folders, pupil contracts/logs and a reading specialist-classroom teacher conference log detailing on-going articulation between the reading specialist and classroom teacher. Reading specialists were also required to attend the monthly in-service training program.

The objectives of the Optional Assignment Diagnosis and Treatment of Reading Disabilities Program were to demonstrate achievement beyond expectation in the reading skill areas measured by the appropriate level of the Stanford Diagnostic Reading test.

The evaluation design utilized the subtests of the Stanford Diagnostic Reading test, brown level for 3&4 and green level for 5-9 on a pretest posttest basis. The evaluation and statistical design utilized the U.S.O.E. Norm Referenced Model.

Pretest and posttest scaled scores means and standard deviations for each SDRT subtest were calculated, as were the correlations between pretest and posttest scores. Mean scores at each grade level were converted to percentiles and normal curve equivalents. The t-test for correlated groups was used to determine the significance of the difference between pretest and posttest scaled score means. The data following summarizes pre and posttest mean percentile scores. Normal curve equivalent gains and the t value and corresponding significance levels of the pretest/posttest differences.

The results of pre and posttesting as presented for grades 3, 4 and 8 must be viewed cautiously, since the number of pupils tested are small. For the most part, normal curve equivalent gains are positive for grades 6-9. However, much of the inferential statistical data is largely non-significant. At the ninth grade level, where the number of participants are sufficient for statistical confidence, positive and significant gains were made in all specific skill subtests.

Overall, it appears that the program objectives were achieved.

CONCLUSIONS

The Optional Assignment Diagnostic and Treatment of Reading Disabilities Program has achieved its objective in some of the reading skill areas measured by the Stanford Diagnostic Reading test. However, some of the data is based upon small sample sizes which results in a state of lowered confidence with respect to data trends. In previous years, this project has shown itself to be effective.

RECOMMENDATIONS

In light of the program's past history of success in meeting its objectives, it is recommended that the program be recycled. The reading coordinator should closely monitor program implement to insure that diagnosis, prescription and teaching strategies reflect pupil needs.

DISTRICT 24

1978-79 EVALUATION

PROGRAM OPTIONAL ASSIGNMENT DIAGNOSIS & TREATMENT OF READING DISABILITIES 5079 91630

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
3	B	N=11	26.36	32.36	6.00	9.90	10.31	14.46	-.023	1.38
3	C	N=11	27.36	30.00	2.64	14.65	15.68	9.56	0.803	0.91
3	G	N=11	16.82	27.18	10.36	11.21	17.34	17.45	0.313	1.97
4	B	N=12	33.58	35.75	2.17	13.94	9.07	9.77	0.716	0.77
4	C	N=13	30.92	37.62	6.69	14.91	12.65	8.20	0.835	2.94
4	G	N=8	33.75	37.25	3.50	16.43	13.38	6.07	0.937	1.63
5	B	N=31	34.48	36.32	1.84	13.82	15.52	14.83	0.494	0.69
5	C	N=32	29.31	34.63	5.31	14.47	11.83	10.16	0.719	2.96
5	G	N=33	31.64	36.42	4.79	14.72	16.07	11.79	0.710	2.33
6	B	N=38	32.63	36.21	3.58	12.14	11.27	12.32	0.448	1.79
6	C	N=38	32.61	39.87	7.26	14.18	12.52	10.63	0.689	4.21
6	G	N=38	39.24	47.63	8.39	15.37	16.73	10.90	0.773	4.75
7	B	N=23	32.04	31.13	-0.91	13.33	9.46	8.80	0.753	-0.50
7	C	N=23	27.30	33.96	6.65	13.48	9.70	7.20	0.857	4.43
7	G	N=23	37.61	46.09	8.48	13.97	23.12	13.26	0.857	3.07
8	B	N=3	37.33	37.67	0.33	5.51	2.52	4.62	0.553	0.13
8	C	N=3	37.00	36.67	-2.33	7.00	4.62	3.79	0.866	1.07
8	G	N=3	45.00	46.00	1.00	17.09	26.21	9.54	0.991	0.18

DISTRICT 24

1978-79 EVALUATION

PROGRAM O/A. DIAGNOSIS & TREATMENT OF READING DISABILITIES 5079 91630

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
8	B	N= 3	37.33	37.67	0.33	5.51	2.52	4.62	0.553	0.13
8	C	N= 3	37.00	34.67	-2.33	7.00	4.62	3.79	0.866	1.07
8	G	N= 3	45.00	46.00	1.00	17.09	26.21	9.54	0.991	0.18
9	B	N= 30	30.70	35.27	4.57	7.53	8.24	7.33	0.571	3.41
9	C	N= 30	32.50	37.43	4.93	7.30	8.77	8.08	0.507	3.34

FINAL EVALUATION REPORT

1978-79

DISTRICT 24 DECENTRALIZED TITLE I

UMBRELLA AND IMPACT AID (PL 81-874)

PROJECT TITLE: Optional Assignment Diagnostic/Prescriptive Mathematics Program

TITLE I FUNCTION NUMBER: 5079-91631

IMPACT AID FUNCTION NUMBER: ~~5079-91651~~

Virginia E. Morrissey
Community Superintendent

Sheila McDonnell
Director, Federal & State Programs

Prepared by:

Sheila McDonnell
Director,
Federal & State Programs

PROGRAM DESCRIPTION

OPTIONAL ASSIGNMENT DIAGNOSTIC/PRESCRIPTIVE MATHEMATICS PROGRAM

The Optional Assignment Diagnostic/Prescriptive (D/P) Math program established five remedial mathematics centers, each 50% funded, at Public Schools 71, 81, 91, 153 and 229. The other half of each center was funded through PSEN. The D/P Math program is designed to provide corrective mathematics diagnostic and prescriptive services to 24 target pupils at each elementary center. Approximately half the target pupils are Optional Assignment certified. The criteria for selection of program participants was a score of one and a half or more years below grade level on the Wide Range Achievement Test, Mathematics section.

Each D/P Math Center was staffed by a teacher specially trained for the program. A Mathematics Resource Teacher who provided staff training and coordinated the program was also funded through Optional Assignment on a 30% full-time equivalent basis. A total of 125 Optional Assignment pupils were serviced by the centers, 13 more than projected. Pupils worked the center on a daily basis for one hour.

The instructional methodology for this project is an individualized, self-contained instructional system with eleven skill area strands (numeration, addition, subtraction, multiplication, division, fractions, applications, money, time, measurements and geometry). The individualized math program is organized to present the math skills and concepts in a logical succession of eleven content strands and nine levels of difficulty for each strand. The program is implemented in two phases. First phase is comprehensive placement testing via diagnostic testing to determine each pupil's level of mastery in each of the eleven content strands. Based upon the profile developed as a result of the placement testing, the teacher begins an ongoing series of test-teach cycle which constitute the prescriptive implementation phase. Each teaching cycle is composed of a series of activities which include math activities with manipulative and audio-visual instructional materials, pupils work in math skillfolders and small group math seminars led by the teacher. Following the teaching cycle, unit post-tests are taken to determine mastery. If the student has mastered the unit, he moves on to another instructional unit. If the unit is not mastered, a reteaching process ensues.

The diagnostic/prescriptive math instructional methodology described above was implemented via the Individualized Mathematics System, a comprehensive instructional program that provided the major diagnostic/prescriptive instructional materials necessary for instruction. In addition, math manipulative and audio-visual materials were provided for the pupils in order to implement the instructional math activities.

Each math center has a calculator for reinforcement, review and understanding of arithmetic laws. The Digitor is used to reinforce basic algorisms. The System 80 machines and software are applicable to each of the math strands and levels of difficulty. Tape recorders are used by the teachers to record lessons and by individual and samll groups of pupils to receive instruction.

The objectives of the Diagnostic/Prescriptive Mathematics program were to demonstrate achievement beyond expectation in the mathematics skill areas of computations, applications and problem solving. Growth in these skill areas were measured on a pretest-posttest basis utilizing the appropriate level of the Stanford Mathematics Test. The evaluation design and procedures specified by the U.S.O.E. Norm-Referenced Model were utilized.

Pretest and posttest scaled score means and standard deviations for each subtest were calculated, as was the correlation between pre-and-posttest scores. Mean scaled scores were converted to percentiles and Normal Curve Equivalents. The t-test for correlated groups was used to determine the significance of the difference between the no treatment expectation and actual posttest scaled score means. The data is presented on the following page.

An eximation of the data indicates that among the centers, grades three through six, all NCE gains were positive and almost all critical ratios of the t-test were statistically significant. The conversion of scaled scores to grade equivalents also showed that gains made were in the area of 1.5 years; about twice the growth expected between pre-and posttesting.

CONCLUSIONS

The data reported for the Optional Assignment Diagnostic/Prescriptive Math program indicate successful achievement of program objectives at the elementary school level. In addition, achievement was consistent among all measured subtests; concepts and problem solving as well as computations.

RECOMMENDATIONS

1. The program is most effective for all elementary grade levels serviced. The D/P Math instructional model should be recycled.

DISTRICT 24

1978-79 EVALUATION

PROGRAM OPTIONAL ASSIGNMENT DIAGNOSTIC PRESCRIPTIVE MATH 5079 91631

Grade Level	Subtest	NCE Score	Pre Mean	Post Mean	Diff.	Pre S D	Post S D	Diff.	Correlation	Correlated T
3	L	N=14	29.50	29.64	0.14	13.45	8.64	13.72	0.289	0.04
3	N	N=14	28.71	26.57	-2.14	9.79	10.54	10.34	0.485	0.78
3	S	N=14	25.86	36.07	10.21	11.76	11.26	15.51	0.092	2.46
4	L	N=28	34.86	35.68	0.82	11.89	14.55	14.00	0.454	0.31
4	N	N=28	32.75	36.79	4.04	9.44	12.71	15.25	0.075	1.40
4	S	N=27	31.07	33.67	2.59	10.31	10.48	9.81	0.554	1.37
5	L	N=34	32.71	36.59	3.88	15.64	17.86	14.65	0.625	1.55
5	N	N=34	29.74	38.06	8.32	11.91	13.31	12.39	0.522	3.92
5	S	N=33	27.39	33.30	5.91	12.75	17.60	13.46	0.649	2.52
6	L	N=20	35.20	50.30	15.10	11.60	14.06	14.44	0.379	4.68
6	N	N=20	32.45	41.50	9.05	14.27	17.85	12.70	0.709	3.19
6	S	N=20	30.50	40.70	10.20	13.37	13.14	12.73	0.539	3.58